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Road vehicles — Brake linings — Seizure to ferrous mating surface due to corrosion — Test procedure

Véhicules routiers — Garnitures de freins — Adhérence de la surface ferreuse due à la corrosion — Méthode d'essai

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO member bodies). The work of developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been set up has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 6315 was developed by Technical Committee ISO/TC 22, *Road vehicles*, and was circulated to the member bodies in November 1978.

It has been approved by the member bodies of the following countries :

Austria	Ireland	Spain
Belgium	Italy	Sweden
Bulgaria	Japan	Switzerland
Czechoslovakia	Korea, Dem. P. Rep. of	Turkey
Denmark	Mexico	United Kingdom
France	Netherlands	USA
Germany, F. R.	Romania	USSR
India	South Africa, Rep. of	Yugoslavia

No member body expressed disapproval of the document.

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Road vehicles — Brake linings — Seizure to ferrous mating surface due to corrosion — Test procedure

0 Introduction

Vehicles operating in wet weather may be parked with brakes "on" for considerable periods. The wet conditions are conducive to corrosion which may result in a bond forming between lining and mating surface.

If of sufficient strength, the bond may be intact after brake release thus restraining the road wheels.

1 Scope and field of application

This International Standard specifies a laboratory method for conditioning brake linings in an environment that will promote corrosion, and a test method to assess the strength of bond formed by corrosion. For comparison of lining behaviours, it is essential that the material and condition of ferrous mating surfaces be constant and repeatable.

This International Standard applies to drum brake linings and disc brake pads fitted to the brakes of road vehicles. They may be tested in new or used condition.

2 Test apparatus

The required apparatus shall consist of :

2.1 for drum brakes, a means such as screws and torque wrench, by which the shoes with linings may be maintained in contact with the drum at a known pressure;

2.2 for drum brake linings, an axle, to which the drum may be locked and about which a lever which connects fairly with a brake shoe may rotate. A means for measuring force applied to the lever is required;

2.3 for disc brake pads, a means such as dead weight or clamp, for maintaining pad and disc in contact at a known pressure;

2.4 for disc brake pads, a table, to which a disc may be clamped and a measurable force applied fairly to a radial edge of a pad;

2.5 a humidity chamber large enough to accept drums and discs;

2.6 water absorbent paper, free of clays, diatomaceous earth, etc., and containing no chemicals that could affect rusting behaviour.

3 Sampling and preparation

3.1 New components

3.1.1 Drum brakes

Six representative full size linings, or parts of such linings (width equal to shoe width, with maximum of 80 mm, and length equal to lining sample width), two shoes and one drum are required.

When linings are assembled to shoes, the assemblies shall be ground to a radius that will ensure full area contact with the drum braking path.

The contacting surfaces of the linings and drum shall be clean, free from dust and of condition and finish that are representative of normal manufacturing standards.

3.1.2 Disc brakes

Six representative pads and one disc are required.

— Pad and disc contact surfaces must be flat.

— The contacting surfaces of the pads and disc shall be clean, free from dust and of condition and finish that are representative of normal manufacturing standards.

3.2 Used components

Care must be exercised when removing components from a vehicle to avoid damage or contamination. The components shall be marked before removal so that they may be reassembled in the same relative positions during test.

Components may be tested with their working surfaces as removed from the vehicle, or the friction material surfaces may be lightly rubbed with grit paper and the iron surfaces rubbed with grit paper and cleaned with petroleum-ether.

4 Test procedure

In testing new components, the same procedure is to be carried out for the six samples.

— Set the humidity chamber controls to provide a relative humidity of 95 ± 2 % at 50 ± 3 °C.